

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave.St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-013844**Date Inspected:** 05-May-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

CWI Inspectors: Mr. Li Yang, Mr. Xu Xian Ping, Mr. Geng Wei

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

**OBG BAY 6**

This QA Inspector observed ZPMC welder Mr. Shen Tianju, stencil 215083 is using the shielded metal arc welding process WPS-B-T-3112-1 to make Jacking Frame weld WJF-0-077. This QA Inspector observed ZPMC QC Inspector Mr. Liu Chuan Gang has recorded a welding current of 253 amps and Mr. Shen Tianju appears to be certified to make this weld. ZPMC has installed an electric heating element to maintain the base material temperature during this welding and the welding electrodes are being stored in a portable electrode storage oven that is warm to the touch. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Jang Xuhe, stencil 057795 is using the shielded metal arc welding process WPS-B-T-3112-1 to make Jacking Frame weld WJF-0-141. This QA Inspector observed ZPMC QC Inspector Mr. Liu Chuan Gang has recorded a welding current of 252 amps and Mr. Jang Xuhe appears to be certified to make this weld. ZPMC has installed an electric heating element to maintain the base material

---

## WELDING INSPECTION REPORT

( Continued Page 2 of 4 )

---

temperature during this welding and the welding electrodes are being stored in a portable electrode storage oven that is warm to the touch. Items observed on this date appeared to generally comply with applicable contract documents.

### OBG Bay 2

This QA Inspector observed ZPMC welder Mr. Ji Hongwei, stencil 058245 is using flux cored welding procedure WPS-345-FCAW-1G(1F)-Repair-1 to make traveler rail repair weld 20TR1-006-003 in accordance with weld repair document B-WR11956. The reason for this repair is due to ultrasonic rejections as listed on UT report #B787-UT-12188. This QA Inspector observed that Mr. Ji Hongwei appears to be certified to make this weld and ZPMC QC Inspector Mr. Zhu Lin has recorded a welding current of 296 amps and 30.6 volts and this QA Inspector measured a welding current of approximately 280 amps. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Gu Xueying, stencil 045218 is been using shielded metal arc process WPS-345-SMAW-1G(1F)-Repair to make repairs of visual rejections in floor beam weld FB3189-001-012. This QA Inspector observed Ms. Gu Xueying appears to be certified to make this weld. ZPMC QC Inspector Mr. Zhu Lin informed this QA Inspector that Ms. Gu Xueying and after this QA Inspector attempted to find this WPS in OBG Bay 2 Mr. Zhu Lin informed this QA Inspector that Ms. Gu Xueying is using welding procedure WPS-B-P-2211-B-U2 instead of WPS-345-SMAW-1G(1F)-Repair. Items observed on this date appeared to generally comply with applicable contract documents.

### OBG Bay 1

This QA Inspector observed ZPMC workers have been performing heat straightening of OBG Traveler Rail 20TR-021 in accordance with temporary heat straightening document HSR(B)-363 which has been approved for use by Caltrans Engineering on April 21, 2010. This QA Inspector observed ZPMC QC Inspectors appear to have been monitoring this heat straightening. This QA Inspector did not observe any heat straightening taking place.

### OBG Bay 14

This QA Inspector observed ZPMC welder Mr. Sun Gusong, stencil 058592 has recently used shielded metal arc welding process to make tack weld in weld joint SEG3003B-006 that is located at OBG segment 12CE, panel point PP117. This QA Inspector observed Mr. Sun Gusong appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Li Jun, stencil 051348 is has recently used shielded metal arc welding process to make tack welds between the deck plate and diaphragm plates near panel point PP103 that is located at OBG segment 12CW. This QA Inspector observed Mr. Li Jun appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

### OBG Segment Assembly

This QA Inspector observed ZPMC welder Mr. Chen Ren Zhi, stencil 058087 has recently used shielded metal

---

## WELDING INSPECTION REPORT

( Continued Page 3 of 4 )

---

welding process WPS-B-P-2114-FCM-1 to make OBG repair weld SEG035E-044 inside cross beam CB7. This weld repair is being documented on B-WR12520 to correct misaligned stiffener plates between panel points 56 and 58. This QA Inspector observed Mr. Chen Ren Zhi appears to be certified to make this weld ZPMC CWI Mr. Li Yang has documented a welding current of 148 amps. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Sun Lingling, stencil 048047 has recently used shielded metal welding process WPS-B-P-2114-FCM-1 to make OBG repair weld SEG035E-048 inside cross beam CB7. This weld repair is being documented on B-WR12520 to correct misaligned stiffer plates between panel points 56 and 58. This QA Inspector observed Mr. Chen Sun Lingling appears to be certified to make this weld ZPMC CWI Mr. Li Yang has documented a welding current of 135 amps. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Tian Zhaoquan, stencil 045246 is using shielded metal arc welding procedure WPS-B-P-2213-B-U2-FCM-1 to make 3G (vertical) position shielded metal arc tack welds on stiffener plates between OBG segments 8AW and 8BW counterweight side plates. This QA Inspector observed Mr. Tian Zhaoquan has a welding current of approximately 160 amps and Mr. Tian Zhaoquan appears to be certified to make this weld. This QA Inspector observed the welding electrodes are being stored in a heated portable electrode storage oven and the base material appears to have been preheated with an electrical heating element located on the interior of the OBG segments. Items observed on this date appeared to generally comply with applicable contract documents. See the photograph below for additional information.



### Summary of Conversations:

See Above.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

---

**Inspected By:** Dawson,Paul

Quality Assurance Inspector

---

## WELDING INSPECTION REPORT

( Continued Page 4 of 4 )

---

**Reviewed By:** Carreon,Albert

QA Reviewer